

Melbourne Botanic and Domain Gardens, Victoria.

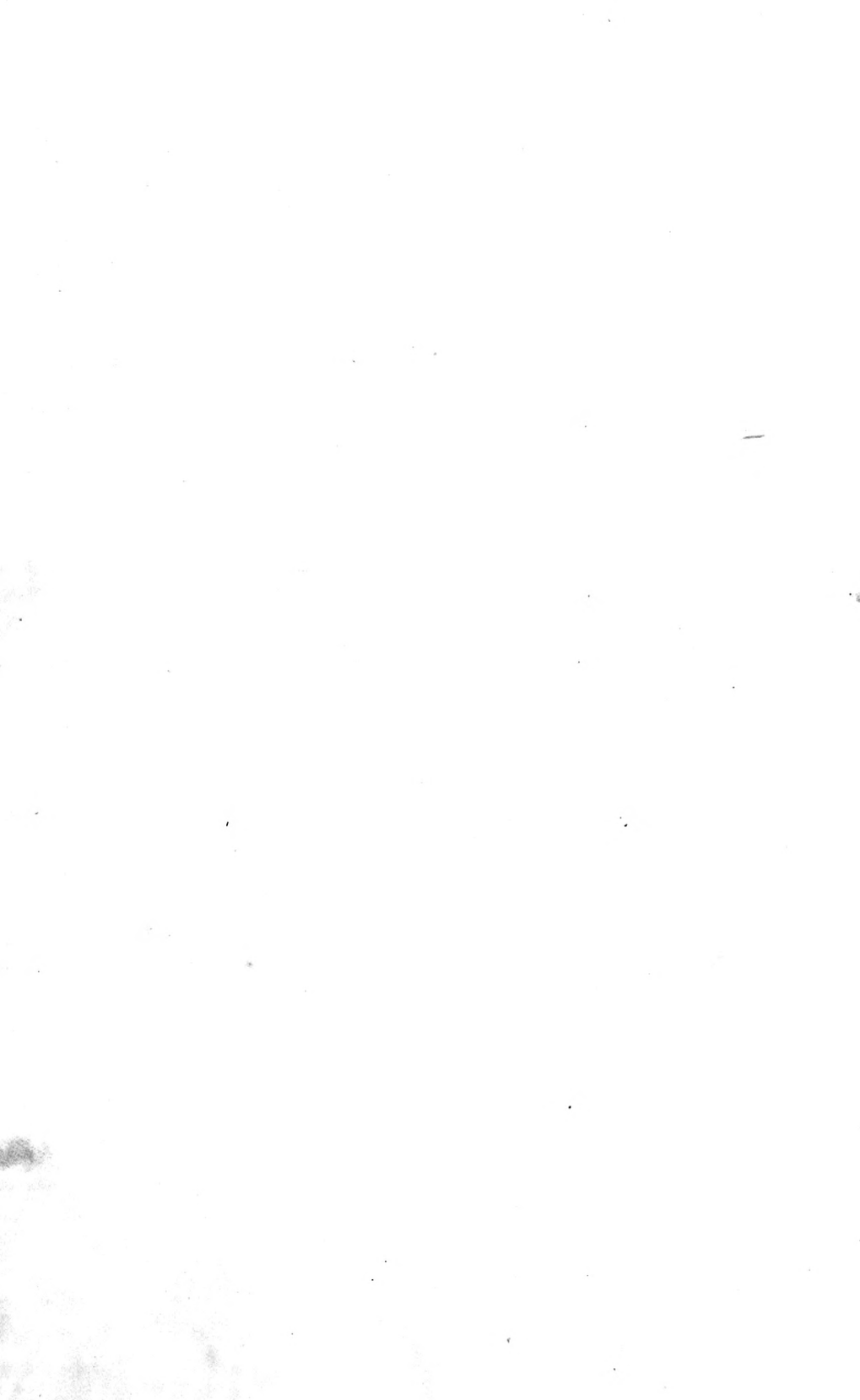
ANNUAL REPORT
ON THE
MELBOURNE BOTANIC GARDENS,

GOVERNMENT HOUSE GROUNDS AND DOMAIN.

BY
W. R. GUILFOYLE, F.L.S., C.M.R.B.S., LONDON,
CURATOR.

MELBOURNE:
BY AUTHORITY, JOHN FERGES, GOVERNMENT PRINTER.

M DCCC LXXVII.



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ANNUAL REPORT

OF THE CURATOR OF THE

BOTANIC AND DOMAIN GARDENS, MELBOURNE.

TO THE HONORABLE FRANCIS LONGMORE, M.P., MINISTER FOR
LANDS AND AGRICULTURE, ETC., ETC.

Botanic Gardens,
Melbourne, 25th June, 1877.

SIR,

I have the honor to submit herewith my Fourth Annual Progress Report on the Botanical and Domain Gardens, dating from July 1876.

The general work accomplished in the Botanic Gardens during the financial year has been considerable. Though the weather at times proved very adverse—one flood in particular doing much damage—operations steadily continued. The extra laborers allowed last year (12 in number) enabled me to make great advances in my general design for remodelling these grounds. It is to this temporary and extraneous source of labor that I have in a great measure to look for accomplishing the work of renovation; the regular staff being mainly employed in keeping the Gardens in order. Should the same amount of assistance be granted in the future, the completion of the Botanic Gardens will be most materially forwarded.

The whole of the men employed in the Gardens now work on a departmental system, which has taken some time and experience to perfect. It is most satisfactory in its results. By this means an increased sense of responsibility is created, and a healthy spirit of emulation excited. Speaking collectively, the staff deserve commendation for the manner in which their duties were performed during the year.

In the draft estimates forwarded by me for the ensuing financial year there is a total decrease of £620, as compared with last year, on the amount for the Garden and Domain.

It is highly desirable that on entering a Botanic Garden visitors should at once recognise the purpose to which the grounds are devoted, by seeing groups arranged according to their botanical order.

Thoroughly appreciating this fact, I have continuously held in view the production throughout the Gardens of a classified system, which, instead of being dwarfed by localisation to one particular spot, should be broad, intelligible, and widely spread. In some public gardens the climate would prevent this being done to any material extent; but such an objection cannot be urged in this colony. No necessity exists for allowing botanical correctness and landscape effect to clash in the development of the Melbourne Botanic Gardens. To combine the two, as I have pointed out in previous reports, has been my design from the beginning; and that design has been carried out as the work of renovation went on. As stated in my last report, the first group—Amaryllideæ—was completed, near the Band stand, last year. This year, a large number of orders have been grouped in suitable positions, as follow:—

On the new Lawn (8 acres in extent, and made this year) the following have been placed:—Laurineæ, Pittosporæ, Saxifrageæ, Solanæ, Proteaceæ, Polygalæ, Anonaceæ, Magnoliaceæ, Ranunculaceæ, Urticæ (including Ulmaceæ, Moraceæ, Cannabinaeæ, and Platanaceæ), Ternstroemiaceæ, Ericaceæ, Epacridæ, Rosaceæ, Cupuliferæ, Thymeleæ, and Berberidaceæ. This lawn (which is of larger dimensions than any of the other three in the Botanic Gardens) will have a sward composed of mixed grasses, principally *Stenotaphrum glabrum* (buffalo grass); *Cynodon dactylon* (couch grass), and English lawn grasses. A judicious mixture of these produces a more elastic, permanently vivid, and beautiful turf than any single species of grass.

On the lawn near the Reservoir, close to Anderson street, the orders Myoporineæ, Acanthaceæ, Verbenaceæ, Scrophularineæ, and Bignoniaceæ have been grouped. It was necessary for taking the new Conservatory levels to lower the crest of the hill in this spot; and a triangular piece of lawn was then formed, on which the above orders were grouped. Close to the reservoir is arranged the order of the Jasmineæ, which includes the *Fraxinus*, &c. The fence enclosing the reservoir has proved useful as a trellis for training the climbing species—such as the Jasmynes.

A list of the species belonging to each order as grouped, will be found in Appendix A attached to this report.

The plants representing these and other orders were mostly taken from thickets and other places where they were hidden from view, or scattered promiscuously over the grounds. It is necessary to add that the different species have not been placed in formal beds, but in irregular

groups, cut out of the sward ; and so arranged that the taller growing specimens are placed in the centre, the shrubs or herbaceous kinds in front.

The curves are so formed that the visitor can read the name of each plant without walking on the beds ; and besides the botanical term and authority for it, the vernacular name, habitat, &c., is given upon the label. It is also my intention to place in each particular group a label detailing the general medicinal properties of the order, whether stimulant, febrifugal, demulcent, &c., &c., &c. By thus grouping the different orders, the requisite landscape effect is preserved, while the botanical student's researches are facilitated. Very shortly other important orders will be located in suitable spots, including the Myrtaceæ, Leguminosæ, Liliaceæ, Salicaceæ, Betulinæ, Sapindaceæ, Malvaceæ, Tiliaceæ, Sterculiaceæ, Rubiaceæ and Araliaceæ. So far as the work has proceeded, the improved appearance of the Gardens has been fully recognised and acknowledged. The classification and exhaustive catalogue (the latter being nearly completed) will render easy the task of scientific enquirers, whose visits are actuated by other motives than mere admiration for beautiful scenes and landscape pictures.

While on this subject, I may point out that the mere fact of some groups being at present incomplete as collections of the various species, is not to be taken as an indication that the Gardens are altogether deficient in genera which are unrepresented in the groups. It will be readily understood that until the rough work of formation is thoroughly over, a landscape gardener must be very careful in dealing with the sensitive material with which he has to produce his effects. It will also be apparent that while some varieties of plants are sufficiently hardy to be at once placed in the midst of the alterations going on around them, others necessary to complete the group require greater care in the manner and season of transplanting. Having explained the progress made thus far, in making the Botanic Garden really worthy of the name, it only remains to say that when the general design is completed, thousands of very valuable botanic specimens will be planted out in their appropriate localities. I have every confidence that the result will be a garden in which facility of research, and scientific classification, will combine with sterling beauties of landscape scenery.

It is scarcely necessary for me to contradict a statement which has been made, that valuable botanic specimen trees have been destroyed in the course of the improvements effected in these grounds. Every care has been taken of plants which it became necessary to remove ; and the

precautions in handling were attended with the greatest possible success. The collection of valuable specimens is an extremely rich one. It is being augmented daily; and when the catalogue (of which the press copy is now in an advanced state) is issued, it will be found how unfounded these malicious assertions really are. Plants removed have always been carefully attended to, and even the smaller shrubs have been housed, until they could be permanently placed in their appropriate situations. If the necessary funds are granted, it is my intention immediately to commence a lawn, stretching from the gravel walk at the lower part of the palm house lawn, to the margin of the lake. This lawn I purpose planting with the very beautiful orders of Leguminosæ, and Myrtaceæ—the latter embracing 30 or 40 varieties of Eucalyptus, Eugénias, &c., &c.—some of them magnificent trees of towering stature, others dwarfed but pretty bushes, and all alike charming not only for their foliage but their flowers. Let me briefly describe one or two species of this order as an indication of the effects to be produced with such materials at command. First the *Syzygium Moorei* (of which I have seen whole forests, in Northern New South Wales and Queensland) attaining a height of 70 or 80 feet, and affording when in full bloom, one of the most gorgeous spectacles imaginable; its every branch and even a part of the stem, clothed with one mass of royal purple blossoms, having the appearance of rich pile velvet. Again, what can be more splendid than the brilliant scarlet flowers of some of the *Callistemons*, their numerous and lengthy filaments giving them the appearance of gorgeous bottle brushes! The yellow, lilac, white or pink erect flossy blooms of the *Melaleucas*, peeping above their graceful foliage, are objects of great beauty; and there are many other genera equally handsome. Even the scarlet and yellow varieties of the *Eugenia Malaccensis*, which I met with in Fiji during the cruise of H.M.S. *Challenger*, and which have lately been added to our collection, might by a little care, be acclimatised, and lend a charm to the group. The previous existence in this spot of some large growing species of the order named, and the suitability of the situation to their successful growth, induced the selection of this locality in my original design, for the effect to be created. When this work is accomplished, the lake, now hidden to the view from the upper lawn, will be seen through glimpses afforded between the groups, and thus add variety to the scenery. The dwarf shrubs in the classified groups, backed by the varied foliage and graduated forms of the taller and more stately species, should form component parts of a Public Garden, which,

from its extent of acreage and great natural capabilities, admits of diversified treatment.

I have spoken of contrasted foliage. The imposing effect of this, even without the adjunct of a single flower, may be seen in an excellent picture (by Sonntag) in the Melbourne National Gallery, entitled "A Scene on the Hudson" showing the remarkable results produced by such combinations. Lower down on this new Lawn, near the margin of the lake, will be placed Salacineæ, Betulineæ, and Sapindaceæ; such a position being particularly suited to them, as they are lovers of moisture.

The Fern Gully now contains an extensive collection of beautiful plants. Where half a dozen species only were formerly represented, a space about 140 yards in length, with slopes of 50 yards at the widest part, is filled with graceful representatives of the fern kingdom, and species of trees and shrubs loving cool shade and moisture. The arboreal ferns include some magnificent specimens of *Alsophila Australis*, *Alsophila excelsa*, *Dicksonia antarctica*, *Dicksonia squarrosa*, *Dicksonia Youngiana*, *Cyathea medullaris*, *Cyathea dealbata* (silver tree fern), *Cyathea Cunninghamii* and *Hemitelia Smithii* &c. The dwarf ferns comprise many species of *Pteris*, *Aspidium*, *Asplenium*, *Lomaria*, *Davallia*, *Acrostichum*, *Todea*, *Polypodium*, *Adiantum*, and many others. Plentifully distributed amongst these ferns which are in patches along the water course, and aiding to give a tropical appearance to this sequestered spot, are Cannas, Musa, Alpinias, Callas, Taro, Arundo, Hydrangeas, Gynierium (Pampas grass) Dianellas, Phormium tenax (New Zealand flax) and scores of other plants of a similar character. Amongst the tall trees, (transplanted to afford the requisite shade) are many specimens of *Gleditschias*, *Grevilleas*, *Pittosporum*, *Ulmus*, *Platanus*, *Ailanthus*, *Ficus*, *Tristania*, *Tamarix*, *Dammara*, *Melaleuca*, *Quercus*, and others too numerous to mention. Besides these, are two fine specimens of *Strelitzia Augusta*, one of which had been grown for years in the Palm house; the other was obtained a few days ago from Mr. Smith, of Adelaide. Upwards of 60 healthy plants of *Panax elegans*, raised from seed forwarded through the kindness of Walter Hill, Esq., Director of the Brisbane Botanic Gardens, have been placed in the Gully. A number of epiphytal ferns—the Stag-horn and Elk-horn *Platycteriums*, and the bird's nest *Asplenium*, received from the same gentleman, have been fixed on the shade trees; forming capitals to the colonnade of stems. Clinging to these trees are graceful climbers, profusely planted for the purpose of affording a canopy of shade to this tropical dell. Here, also,

are to be found several hardy orchids—including *Deudrobiums* from Northern New South Wales and Queensland. Principal among the climbing plants are *Passiflora*, *Tropæolum*, *Clematis*, *Lonchocarpus*, *Bankian* Roses, *Tecomas*, *Wisteria*, &c., &c. Some of these graceful plants already hang in festoons from the branches of the shade trees. Judging from their rapid growth, the time is not far distant when they will throw overhead a leafy screen, studded with many hued flowers. Already this spot has proved a great attraction to the visitors, to whom the cool refreshing green of the fern fronds, and the shady aspect, give welcome relief from the fierce glare of the summer sun. Many fine plants of *Macrozamia spiralis* are distributed through this gully and the adjoining Palmetum, greatly adding to the tropical effect. In the lowest portion or dip of this fernery (where the iron bridge and bird-cages formerly stood), a glimpse is afforded of the rustic bridge spanning the lake. In arranging the Palmetum alluded to I have included the *Cycadeæ*, as they are closely allied to the Palms; in fact they are intermediate between the latter and ferns. The classification in question may therefore be considered appropriately placed. The names of the species will be found appended.

The rustic bridge just mentioned was designed principally to break the long line of embankment between the lakes, by bringing together the two promontories, which was done by a one-span arch. Greater variety in the scenery was obtained, by heightening the embankment, and grouping trees and shrubs thereon. At the southern end, a large *Pinus halepensis* and an *Araucaria*, together with some *Corynocarpus* and New Zealand Karaka, form a pretty clump; while on the opposite side by massing *Pittosporums* of various shades of green, a few tall *Cordylines* peeping above them, and drooping to the water's edge a group of *Arundo* or Danubian reed, the monotony of the scene has thus been relieved.

Several Rockeries have been constructed. Close to the rustic bridge is an extensive one, containing a valuable collection of succulent plants; such as various species of *Opuntia*, *Cereus*, *Epiphyllum*, *Aloes*, *Yuccas*, *Agaves*, *Fourcroya*, &c., which were formerly stored in the present fern-house. This house now contains, I have no hesitation in saying, the finest collection of Ferns and Lycopodes in the colony. Care has been taken to secure, by propagation, a supply of the succulent plants represented in the rockeries. The construction of the new bridge was effected by the ordinary labor employed in the Garden, directed by myself; it is built in a most substantial manner, and the cost (£50) was

money well spent, for I will guarantee the bridge lasts for as many years as it has cost pounds. In forming it, two stout stone buttresses were firmly bedded into the clay bottom of the lake, and built up to the requisite height. Four massive beams were then fixed across these buttresses, and the beams planked with stout red gum, bolted to them. On this was laid rough asphalte, in which orange gravel was embedded. Slanting beams—four in number, placed under the bridge, gave it additional strength. Planks were then uailed to the sides, to support the virgin cork with which the arch is faced. The cork has been arranged in irregular masses, giving the appearance of rock work. The buttresses of moss covered stone, obtained from Yarra bend, blend well with the cork. The rustic railing was made of wood obtained in the grounds, (the material being furnished by superfluous limbs of old gum trees, &c.) strongly attached to the frame work. In constructing this bridge, several matters had to be considered—appearanee, economy, and stability. With respect to the first item, the public verdict on that point is satisfactory; so far as stability is concerned, I may mention that the bridge is freely used for the passage of a horse and cart employed in the grounds—a thing absolutely impossible with the former structure. As to economy, the cost was undoubtedly less than a quarter of the sum that would have been asked for in a contract. Added to these facts, I was enabled, by personally directing its construction, to give it the precise appearance I wished, and to get the work done immediately.

The lakes have been kept in order; and the Conservæ mentioned in a previous report practically annihilated. The wild fowl are still plentiful, especially in the open season, when the immunity afforded by this sheet of water seems understood by the birds. The swans, seven in number, are thriving. There are three serious nuisances oeeasionally experienced in the Garden, in the shape of rabbits, wild eats, and dogs. The rabbits are very numerous and mischievous. They get into the drains, and burrow holes under the foundations of trees. The cats are very destructive to the small birds, particularly the English thrushes. The latter, however, I am glad to say, exist in considerable numbers in the gardens. The dogs hunt both cats and rabbits, and are thus perhaps the greatest nuisance of the trio. I have again to note the kindness of Colonel Anderson in allowing me the use of the pontoon raft to remove a large *Pinus halepensis* to one of the islands in the lake, where it now forms a conspicious object in the landscape. Several

fine plants of *Magnolia grandiflora* were also placed on the islands, and additional specimens of the magnificent *Eucalyptus ficifolia*. The specimens of this tree—the grandest of its tribe—placed last year upon the lake islands, have grown five feet in height; so that in a short time their masses of gorgeous scarlet bloom in the flowering season will add to the attractions of this locality. More than a thousand cart loads of valuable manure were removed from the bed of the large lake, and will be utilised in top dressing the new lawns during the present season. It was fortunate that this was done, as a subsequent severe storm nearly caused the lake to overflow, though it had been materially deepened. The *Melaleuca* scrub at the head of the large lake is a fine piece of natural scenery, and requires very careful handling. There is most decidedly room for improvement in this spot, as suggested in my last report; by planting palms, *Rhododendrons*, *Magnolias*, and other suitable shrubs. Any treatment, however, must be undertaken with great forethought and deliberation. Until other portions of the design are completed, this part may well be left in its present state for a time. Progress has to some extent, been made with another classification, the *Coniferae*. The *Pinetum* occupies the place where (as described in a previous report) stiff formal rows of trees, seven or eight in number, were planted, a line of *Araucaria excelsa* being followed by an avenue of *Pinus halepensis*, succeeded by another row of *A. excelsa*; then a line of *A. Cunninghamii*, backed by yet another of *A. Bidwillii*, the whole presenting a monotonous appearance. All of these superfluous specimens, as they are removed, will be used for decorating other parts of the Garden; and the work of addition will in time render this spot a complete *Pinetum*.

Five hundred iron labels were written and placed in position during the year. Careful attention was also given to the renewal of old, defective labels. In the same period upwards of 8,000 wooden tallies were prepared and distributed; of which number, over 1,500 were permanently secured by wire fastenings. I regret to say that great annoyance has been caused from time to time by the wilful displacement of labels, evidently the work of some person or persons, not only maliciously disposed, but also remarkably practical in their misapplication. Labels have been transposed in such a manner as to give rise to suspicions that none, save those well acquainted with the plants thus misnamed, could effect such ridiculous transpositions; while the manner in which the wire fastenings were adjusted proved the Vandal to possess

no prentice hand. Every precaution has been taken to guard against this malignity or senseless practical joking, whichever it may be. Metal labels, with stamped numbers, have been largely employed. Founts of steel type have been procured for stamping names—a system which will ultimately save great time, labor, and expense. The letters will be filled with a preparation of hardened vermilion, producing an agreeable effect.

Two summer houses, or *kiosks*, have been completed, and a third nearly so. The latter stands above the Fern Gully, where the beautiful order of the Lilies will be arranged. All are of a rustic design, constructed of superfluous wood from the wattles lining the Yarra banks. The floors are composed of blocks of wood, laid down in a sort of tessellated pattern, and in a substantial manner. Seats to accommodate 50 persons surround the interior. Two pipes have been laid in the grounds, from which a supply of *Van Yean* water can be obtained by visitors. Considering the great number of people who visit the Gardens, it is very desirable that drinking fountains should be liberally provided throughout the grounds. There should also be one grand fountain in the centre of the Gardens, forming an attractive feature and supplying a useful purpose. One of the pipes supplies a small fountain near the rustic bridge; the other is at the entrance gate near the office.

A large portion of the Palm house lawn (which has been increased by several acres) has been planted with groups of Queensland trees which have thriven remarkably well, the ground having previously been carefully drained. These groups have all been labelled with botanical and common names. Labels having a red mark underneath signify that the plant is also indigenous to New South Wales. This geographical distribution has proved very interesting to visitors from the neighboring colonies, enabling them to recognise at one glance many old acquaintances, while the various trees and shrubs, changeful in their hues as they are diversified in size and age, fall agreeably upon the eye as it glances upon them from the unbroken sward.

The floral display during the year appeared to give general satisfaction, and attracted a large share of attention. This matter will of course be properly attended to during the ensuing year. Here I may mention that I have this year asked for two lodges, one to be placed opposite Park street, the other at the principal entrance gate to the Gardens from the St. Kilda road. A third might be advantageously placed at the entrance gate of the Domain, opposite the barracks. The

gardeners' houses are at present scattered about the grounds, and are for the most part very unsightly, dilapidated wooden buildings. For the protection of the Gardens it is necessary that these lodges should be built. If neatly designed, they can be made picturesque features in the landscape, as is shown by the red brick lodge which stands near the Yarra bank. The present wooden buildings require constant patching to keep them in repair.

Notwithstanding the occasional heavy rains, and traffic occasioned by the removal of so many large trees from one part of the Garden to another, the new walks have preserved their solidity. The excellent gravel, discovered by sinking, has been extensively used in the formation of walks, which in many instances have replaced others, obliterated in consequence of their uselessness, narrow dimensions, or unsightly shapes. This gravel has proved a very valuable acquisition, retaining the rich orange color which contrasts so agreeably with the green lawns. The principal walks round the four lawns have been finished.

Reference may here be made to another important matter. A number of plants, generally supposed to be unsuited to out door culture in this climate, were successfully placed out in the grounds. Amongst them were "*Quisqualis indica*," "*Beaumontia grandiflora*," "*Euphorbia splendens*," "*Strelitzia augusta*," "*Strelitzia regina*," "*Allemanda nerifolia*," &c. These and many other tropical plants, have proved hardy, growing vigorously outside. The *Alsophila excelsa*, of Norfolk Island, a tree fern which attains the height of 80 feet, has also grown with remarkable rapidity in the open air. As a counterbalance, however, I regret to say that my anticipations respecting the Cinchona (Peruvian Bark) have proved correct—it is an unmitigated failure. I believe that a number of young and strong specimens of this valuable medicinal plant were at one time distributed through this Colony to people in suitable positions for giving every care and attention to them. Yet I have failed to ascertain one instance where the experiment has been attended with success out of doors. On Phillip and French islands, according to reports I have received from gentlemen residing in those localities, some highly tropical plants have maintained life in sheltered positions. But, where a plant can only just manage to exist in certain favorable situations the experiment of acclimatisation looks very like a failure. We have not even this consolation in the case of the Cinchona; and however valuable a plant may be, it is useless to waste money and time in trying to conquer Nature in such an effort. I repeat my firm

belief, that the *Cinchona* will not grow in Victoria, except eared for in a bush house or shed. But, there are many other valuable plants and trees which are suitable to our climate, and which might be largely cultivated with very important results to the whole country. The Hickory is an instance. By the last mail, I received a large number of Hickory seeds from America. I believe these to be sound; and from experiments made during the past twelve months, I feel assured this tree will eventually prove a most valuable article of our commerce. Another very valuable plant, the Valonia Oak (*Quercus Ægilops*) has lately caused much public discussion. Judging, however, from the slow growth of the two specimens in the Garden during the last four years (they are scarcely more than two feet high), this tree will take a very long time before it is sufficiently matured to become of commercial value. On the shores of the Mediterranean the acorn cups of this oak produce tannin in large quantities, and of a very valuable nature. Considering, however, the slow growth of the tree, and the improbability on that account of its being extensively cultivated by private enterprise, it might be considered worthy of plantation in the State Forests, or other Government lands; since if it proved successful, it would eventually form a large source of revenue. Mr. Laurence, who lately introduced seeds of the Valonia Oak, deserves every praise for his experimental effort.

The subject of fodder plants and grasses is one of very great importance to this Colony; and is therefore deserving of particular notice in a Public Garden, with a view to determining the kinds best adapted for cultivation in various localities. I append a list of 67 Grasses (with botanical and common names) all of which have been propagated in the Botanic Gardens. I would suggest that the various local Agricultural societies would do well to procure specimens of these plants, give them a fair trial, and periodically report on them. The result would undoubtedly be the dissemination of information very valuable to the pastoral and agricultural communities.

Much interest has lately been excited by a plant called the Prickly Comfrey (*Symphytum asperum*). A number of roots of the Comfrey were purchased for the Gardens from the consignee, Mr. Cresswell, seedsman, of Swanston street. I have also received seeds of it from Dr. J. Hooker, Director of the Royal Botanic Gardens at Kew. I have raised a quantity of sets, and sent out a few specimens, including some to Dr. Schomburgk of the Adelaide Botanic Gardens. There can be no question that this plant is of very great value as a fodder plant, even

if we take a moderate estimate of its productive powers. An analysis by Professor Voeleker gives the following results :—

	Leaves.		Stem.	
	In Natural State.	Calculated Dry.	In Natural State.	Calculated Dry.
Water	88.400	...	94.74	...
Flesh-forming substances	2.712	23.37	.69	13.06
Non-nitrogenised ditto
Heat and fat producing matters	6.898	59.49	3.81	72.49
Inorganic matters (ash)	1.990	17.14	.76	14.45
	100.000	100.00	100.00	100.00

From 80 to 120 tons to the acre is stated to be the yield of the Prickly Comfrey. Enough has certainly been adduced to render a general trial of this plant desirable. The following extract will serve to show the capabilities of this plant in a warm climate. The *Ceylon Times* of February 16, 1877, says :—

“In December last we alluded to the properties of the new fodder now coming into such general use, and which we consider so suitable for poor soils, and therefore presenting inducements for its general introduction into the maritime districts of this island. Since we then wrote we have had a long season of drought, and on all sides complaints are heard of the scarcity of fodder for cattle, though not to the same extent as in India. The following notes on the early trials with this new cattle food will perhaps give a better insight into its nature and qualities than any other account could do :—‘Having procured a few sets with roots attached we planted them in a plot on the cold clay of the Forest Marble Rock, previously slightly manured. These sets grew rapidly, and we were soon enabled to divide them into more than a hundred individuals as before, which were planted in like manner, and so working on till we had as much as a quarter of an acre of ground occupied, and our crop was not only abundant, but some of the stems were a considerable height, some few having been left to show its mode of growth. The rest, however, was used in various stages of growth as cattle food, though we must confess to having experienced no little disappointment on our first trials, yet no sooner did the cows (especially milk cows), horses, sheep, and pigs begin to understand it than they ate it most greedily, and our report upon it was that while all creatures seemed to thrive upon the Comfrey, yet in no instance could we find the slightest evidence of any evil effects. The crop was enormous, and this too upon land of very medium quality ; but we have this year been trying its growth on light sandy soil, and can report that all through the season of drought the deep thick roots of the Comfrey have drawn up the moisture which rises hygrometrically in our sand-bed, and the result has been a succession of green leaves when surface plants were an utter failure.’”

Another plant—the *Prosopis pubescens* (Screw or Mesquit bean of South America, the Tornillo of Sonora) attracted general attention

during the past year. Through the courtesy of Dr. Hooker, I obtained a quantity of seeds of this plant; and in consequence of eulogistic notices concerning it which appeared in a portion of the Australian press, I received a very large number of applications for seeds, which were as far as possible complied with. The subjoined communications, received by the June mail from Professor Thiselton Dyer, of the Royal Gardens, Kew, show that the Mesquit bean is at least of very doubtful utility as a fodder plant, even if it be not actually hurtful; and the fact was made public—a very necessary step, since discouragement produced by fruitless labor in rearing such plants is calculated to destroy that public spirit in the cultivation of new and useful introductions which is so much to be desired.

"SIR,

Royal Gardens, Kew, May 4, 1877.

In reference to my letter, February 20, I am desired by Dr. Hooker to transmit to you the enclosed copy of a letter from the Superintendent of the Botanic Garden in Jamaica, pointing out the necessity of caution in the use of the pods of the *Prosopis pubescens* for the purpose of feeding horses.

I am, Sir, your obedient servant,

"W. R. Guilfoyle, Esq., F.L.S.,

W. T. THISELTON DYER.

Director, Botanic Gardens, Melbourne."

"SIR,

Cinchona Plantations, Jamaica, April 6, 1877.

I have to acknowledge the receipt of your letter dated 20th February last, informing me of the despatch of two bags containing about eight lb. of the pods of *Prosopis pubescens*, which I have also received, together with printed correspondence on the subject of these seeds.

"Some 5 per cent. of these seeds have germinated; accordingly we will have about 100 plants altogether.

"Consequent on the favourable recommendation conveyed in the aforesaid correspondence of the pods for horse and cattle food, and as only a small proportion of the seeds were in a state fit for germination, I, by way of experiment, gave about a pound of the pods to a fine healthy horse. In the morning of the third day after the pods were given to the horse the animal was found dead in the stable, and lying in such a position that left no reasonable doubt that it had died from bellyache. There are therefore strong grounds for believing that the horse thus died from the effects of these pods.

"I presume you are aware that another species of this genus, viz., *Prosopis juliflora*, a very common plant in Jamaica, the pods of which (although a valuable fodder) when eaten by horses, but especially after rains are almost invariably the means of causing severe bellyaches and very frequently death. This is attributed to the germination of the seeds in the stomach of the animal.

"Probably the above remarks may be of service by way of caution to other colonies in which this plant is proposed to be cultivated.

"I am, Sir, your obedient servant,

"W. T. Thiselton Dyer, Esq.,

"ROBERT THOMSON.

Royal Gardens, Kew."

A most estimable fodder plant is the "*Pentzia virgata*" or sheep fodder-bush of South Africa. This was also alluded to in a letter from Dr. Hooker, and is being extensively propagated in the Melbourne Botanic Gardens. From experiments I have made with the *Pentzia virgata*, it is no doubt well suited to the climate of this Colony, growing luxuriantly even in moist situations, though its chief recommendation is, that it flourishes in *arid* soils. It would therefore be a most valuable plant to cultivate throughout the country on an extensive scale. A letter received by me from Mr. W. Moody, of Kakanui, Otago, N.Z., states, that some seeds of *Pentzia*, which he had received, successfully germinated. He says "I have tried it here, and find it to be a good grower, and also capable of standing a considerable degree of frost. It is sometimes as low as 11 and 13 Fahr. on the ground here in winter."

A great deal has been said respecting the "Tussock grass" as suitable to this Colony. The subjoined letter, which I received from Professor W. T. Thiselton Dyer, needs no explanation :—

"MY DEAR SIR,—

"Royal Gardens, Kew, February 26, 1877.

"In answer to your letter of December 27, 1876, I enclose seeds of *Symphytum aspernum*; and at Dr. Hooker's request write to say that seeds of the Tussock grass could only be obtained for you with great difficulty, and that the trouble would hardly be justified, as Dr. Hooker is satisfied it would be of no use in your Colony. Supposing you got it established, the tussocks—which of course are only formed rather slowly—would soon be devoured and extirpated by cattle. A cow will work away at a tussock, till she has quite finished it off; and in places where its cultivation has been attempted as a curiosity, it has had to be carefully fenced in. It is a local plant of very peculiar habits, and not at all well adapted for pasture purposes.

"Yours faithfully,

"W. T. THISELTON DYER."

Other valuable plants and seeds received were *Adansonia Gregorii* (the sour gourd or Cream of Tartar tree) of N. W. Australia; *Aleurites triloba* (the Candle nut tree), known in the several Fijian dialects as "Lauce," "Sikeci," and "Tuitui." From the nuts of this plant a valuable oil is expressed, much employed by artists, and realising £20 per ton in Europe. *Spondias dulcis* (the hog plum of the Society Islands, with fruit resembling in flavor the pine apple, the leaves and bark possessing medicinal properties); *Xanthoxylon fraxineum* (the "prickly ash" or "Toothache tree" of North America, largely used in that country for rheumatic, typhoid, and scrofulous complaints); and very many others, a description of which would occupy too much space. Some Jute seeds, received from Charles Moore, Esq., Sydney Botanic Gardens, were sown in

September last. Seeds were germinated from one of our own plants of *Encephalartos Altensteini*—"the Caffer bread tree."

I have also in contemplation the formation of beds in which the principal fodder plants suitable for the Colony may be shown, and near to them specimens of the various poison plants known to Australia. Such a classification cannot fail to prove highly interesting.

The numbers of plants either quite new to the Gardens, or replacing such as were lost in former years, from June 1873 to the present date are as follows :—Genera and Species 1,213 (of this number about 120 may be considered reintroductions). Varieties and subvarieties 1,884. Total 3,097.

A Rosery is among the contemplated improvements, and will be created directly time and circumstances permit. I have secured a splendid selection of roses, and trust to make the collection of this queen of flowers a very attractive feature of the Gardens. The cultivation of such beautiful flowers as Rhododendrons, Azaleas, Camellias, &c., in public gardens is attended with a great amount of anxiety and care. We have some very choice specimens, and I hope in time to make a good display, though the buds of the Camellias planted out have at present to be rubbed off, to prevent pilferers damaging the young and delicate plants; also to allow the shrubs time to attain a vigorous growth. A large amount of work, attended with some very practical results, has been accomplished in the Botanic Gardens' laboratory during the year. Collections of fibres were prepared and forwarded to the Queensland and Sydney Exhibitions. Among the more interesting exhibits despatched to Sydney were several novel fibres, such as *Buddlea saligna*, *Bromelia sylvestris* (wild pine apple); *Buonapartea juncea* (Peruvian hemp, yielding a splendid fibre); *Cordyline robusta* (Strong Palm Lily); *Cyperus papyrus* ("the paper reed" of the ancient Egyptians). Its valuable qualities as a fibre were first shown in this exhibit. It affords a fibre of firm, fine texture, closely resembling that yielded by *Typha angustifolia*. The qualities of the latter plant as a fibre were also first shown in the exhibits recently sent from these Gardens to the Amsterdam and Philadelphia Exhibitions. Its common name is the "native bullrush" or "Cat's tail." It was stated in a late number of "*The Garden*," that a company had been formed in France, with a large paid up capital, for the erection of machinery to convert the fibre of this *Typha* into textile fabrics. This, therefore, is another plant which might be extensively cultivated in this Colony, with important financial results. The Victorian Taper sedge, giving a very fine and

strong fibre, was also sent; *Cassytha melantha* (the scrub vine of Victoria, with fibre similar to that of the Musaceæ); *Dianellas elegans*, *revoluta*, and *cærulea* (the native Flax Lilies); *D. cærulea* (being commonly known as the Paroo Lily); *Doryanthes Palmeri* (Queensland Spear Lily); *Dasyllirion glaucophyllum* (a Mexican Bromeliad, quite hardy in these gardens); *Juncus Maritima* (sea coast rush); sea coast Mallows; *Lavateras maritima* and *Olbia*, yielding most beautiful fibres by a simple process of maceration, and plants to be highly recommended for cultivation as being of considerable commercial value); *Lepidosperma gladiatum* (sword-rush of the coast, now so favorably known and extensively used in the manufacture of paper); *Moraea Robinsoniana* (Wedding Flower of Lord Howe's Island); *Pandanus Forsteri* (Tent tree of same locality); *Pandanus pendunculatus* (Screw pine of Eastern Australia); *Sansevieria fasciata* (Banded Bow-string Hemp); *Schœnus brevifolius* (Victorian cord rush, a good fibre yielding plant, and very prolific along parts of the coast line); *Xerotes longifolia* (native tussock grass or Mat-rush); *Tritoma uvaria*, and *Tritoma recurvata* (Club-lilies)—the fibre of the latter equalling in strength and texture that of hemp. This plant is very easily cultivated, requiring no more attention than *Phormium tenax*. To show the rapidity with which its fibre can be prepared, leaves in full vigor on the plant at 10 a.m., were converted six hours afterwards into excellent fibre by a boiling process, at the laboratory. Some excellent castor oil has been made from seeds of *Ricinus* grown in the Gardens. Dyes were prepared from *Dais cotinifolia* (African button flower); *Pipturus argenteus* (Queensland grass cloth plant); *Sterculia diversifolia* (Victorian bottle tree); *Sterculia acerifolia* (Flame tree of N.S.W. and Queensland); *Wikstrœmia indica* (Native Daphne); *Baloghia lucida* (Norfolk Island Bloodwood); and *Araucaria Cunninghamii* (Moreton Bay hoop pine). Oleo-resin, with a most fragrant odour, was obtained from seeds of *Pittosporum undulatum*. In addition to these, and many other specimens, the largest and most diversified collection of native woods yet exhibited on behalf of Victoria was forwarded to the Sydney Exhibition; together with a collection of Papers, also prepared in my temporary laboratory. These exhibits were accompanied by an exhaustive catalogue.

The following is a list of Exhibitions to which I have sent collections:—Melbourne and Philadelphia; Philadelphia International; Warrnambool; Geelong Industrial; Amsterdam International Horticultural; Queensland, and Sydney.

It is satisfactory to state that in response to these efforts to make known the botanical resources of Victoria, diplomas were sent from the exhibitions, including Philadelphia.

A number of vegetable products of a similar utilitarian nature have been prepared for the approaching Exposition at Paris, and every effort will be made to have the Colony worthily represented in the Victorian Court. The collections of woods and fibres are being largely augmented. The results achieved with the imperfect appliances at command show the infinitely greater ends attainable if better means of operation were provided. In last year's report a complete list was given of fibres, gums, woods, resins, &c., prepared in the laboratory and forwarded to the various Exhibitions. An appendix to this report contains a list of Exhibits sent to this year's Exhibition at Sydney.

A wing of the New Palm house has been built, about equal in size to the present old house, which is in a very dilapidated condition. It is to be hoped that sufficient funds will be provided to facilitate the completion of the new building, which will be an ornament to the grounds. When such is the case, the many very valuable plants now crowded together, and actually spoiling from that cause, can be placed where they can be seen to advantage.

A Calendar of the time of flowering of every plant in the Garden is regularly kept. This will ultimately prove of great service.

The Herbarium has been considerably added to during the past year; and amongst the many valuable additions was a fine collection of American plants, from the Smithsonian Institute at Washington. This Herbarium has been formed during the past four years. It now contains many thousands of species, and will soon be ready for inspection by visitors to the Botanic Gardens. As in the case of the catalogue and label writing, a common English name will be given to each plant in the Herbarium in addition to its botanical title, and a short description with it. I have not lost sight of the projected arboretums, to represent the trees of the five continents; but as I am carrying out my designs from a centre and gradually extending the radius, these groups, on the extreme edge, can be postponed until work more immediately necessary is accomplished.

The number of large trees removed from the squares or obscure thickets into situations suited to their size and appearance, amounted to 820, of heights ranging from 8 to 30 feet.

The Southern District Band played in the Botanic Gardens in favorable weather, on alternate Saturdays, for the past twelve months. The

members of the band gave their services gratuitously ; and the thanks of the public are due to them for their liberality, in providing such an excellent entertainment. It gives me great gratification to state that on the last occasion, when a moonlight concert took place in the grounds, the conduct of the large number of people who attended was most orderly. So far as I could ascertain, not the slightest damage was done, even to the displacement of a label ; and the grounds might in my opinion be safely used for a similar purpose many times during the year. It is evident that an interest has been created in the public mind, concerning these Gardens, which induces visitors to aid in protecting them from the depredations of what is called the larrikin element. I have had occasion in previous reports to complain of flower and plant robberies committed in the Gardens, and in some degree these still continue, plants being taken from the borders, and even out of the houses in spite of the strict watch kept. A watchman is employed to patrol the Botanic Gardens all night, and measures are taken to ensure the watch being a vigilant one.

A rough estimate was taken of the entrance of visitors on the first Sunday of this month (June) ; the number exceeded 2,000. A very great attendance may therefore be anticipated during the more favorable seasons. I have had written and posted up in various parts of the Garden the following very excellent notice copied from one to be seen in the Fitzroy Gardens, signed by Sir Charles Gavan Duffy. The same suggestion was made by the Hon. J. J. Casey when Minister for Lands, who saw a similar notice in the Berlin Botanic Gardens :—“ These Gardens were established for the recreation and enjoyment of the People ; and the improvements are placed under their guardianship.” The public are thus reminded that they are the natural custodians of this national property, maintained for general recreation and instruction.

GOVERNMENT HOUSE AND DOMAIN GROUNDS.

A large amount of work has been done during the year in the private grounds attached to Government House. The borders round the base of the house, varying in width from 5 to 10 feet, had inferior soil replaced by rich earth, to a depth of 2 feet. The Fountain Court was top-dressed with good soil, and flower-beds cut out in the sward. These beds were filled with gay flowering plants, and kept up a very bright appearance during the year. The orchard was dug over several times

during the year. The fruit-trees were duly pruned, &c., and are progressing satisfactorily. A cow-paddock of 10 acres was formed, which His Excellency required for his fine breed of Alderneys. To form this paddock it was necessary to remove a large number of trees, which was successfully done, the specimens being transplanted to appropriate spots. The ground was then ploughed, harrowed, and sown with English grasses. From the very inferior quality of the soil, top dressing became imperative. Several hundred loads have already been applied; but more must be done in this direction.

The large lawn in front of Government House required great attention. The necessary removal of the crest of the hill left nothing but a stiff, hard clay. About 1,500 loads of soil were carted to fill up, level, and finish the making; and 1,000 loads of manure, street sweepings, &c., were stored, to mix with 4,000 cart loads of virgin soil for a similar purpose. The contract for the latter has been let. This ground is naturally very wet and poor; good drainage is an immediate necessity; and a contract for the purpose has been commenced. The drainage of this and other parts of the ground depends so much on situation, and the nature of subsequent planting, that it requires to be left entirely in the hands of the landscape gardener. My original design, however, was to a certain extent departed from. Draining a garden is an entirely different process to other operations of the kind. Soil, situation, and purpose to which the ground is to be devoted, besides the habits of the plants to occupy the spot, require careful study. It must be remembered that drainage is one of the greatest considerations in the formation of a garden. Few people seem to be aware of the fact that proper drainage, no matter how dry the situation may be, is beneficial to vegetation, as it brings moisture to a dry spot and removes superfluous moisture from a wet one.

The large number of 4,591 young trees and shrubs were removed from the nurseries of the Garden and planted in groups around this lawn, and in the adjoining Domain.

The Croquet Lawn was completed. The borders of this, and other small lawns on the north side of Government House, were top-dressed, and planted with many choice and valuable bulbs and shrubs from various Melbourne nurseries. Near this spot a bush fern house has been built and the spot rendered very attractive.

In the Rockery and Fern Gully, numbers of *Zamias*, dwarf-ferns and miscellaneous plants, were used in the upper portion; all are thriving. A path was made round it, and the borders planted. The place now

presents a pleasing appearance, though time will permit of further improvements. Amongst the ferns added to this gully were the following :—*Gleichenia flabillata*, *G. circinata*, *Hymenophyllum demissum*, *H. nitens*, *Trichomanes venosum*, *Doodia caudata*, *Blechnum cartilagineum*, *Polypodium australe*, *Pteris incisa*, *Doodia aspera*, and others.

The Footpaths, formed by the Public Works Department, on either side of the drive in the grounds, are very unsightly and are of no material advantage. Last year it was found necessary to cut off portions of them, to give effect to a requisite alteration in the drive, by which to shut out the house from the latter, at a particular spot. These paths might be dispensed with. More than 1,400 yards of walks were gravelled, and margined with gutter-tiles for surface drainage. About 400 yards of storm water drainage, were also laid, of 4-inch and 6-inch pipes respectively. Through the kindness of Mr. R. S. Inglis of Richmond a number of large specimens of *Pittosporum undulatum*, *P. nigrescens* and *Corynocarpus* (New Zealand Karaka), were received, and distributed through the private grounds. The whole of these grounds are much exposed to hot and cold winds ; harsh gales occasionally blow off the branches of young trees, and hence great care is necessary in selecting plants suitable to the soil and situation. Those portions of the grounds in which trees and shrubs have been planted were carefully dug over several times during the year. During the late dry summer it took nearly all the time of the staff to keep the plants alive by copious watering, and the weeds consequently made great headway, giving much afterwork to eradicate them. Water pipes are now laid all over the Government House Lawn to the various groups.

In the Domain, five iron and wooden houses were removed from near the Immigrants' Home, and carefully stacked. From these materials several out-houses for tools, &c., were built ; and the *debris* was also found very useful in patching the gardeners' houses ; a tool and cart shed 60 feet long was also built with material from the old houses. A hedge of *Acacias* was planted in an appropriate spot ; and 175 yards of footpaths 7 feet wide reconstructed. About an acre of ground was thoroughly trenched and drained, and added to the outer nursery in Domain ; a good substantial fence was placed around it, and there is now an excellent collection of young trees ready for planting out in spring. Near this spot $3\frac{1}{2}$ acres were fenced in for a horse paddock.

The Domain greatly needs a special vote for its improvement. Before much can be done, it requires draining, trenching, levelling, and sowing

with grass seeds, then the planting of picturesque groups of trees would be attended with success. So far as the means allowed, the grounds were cleaned of unsightly wattles and dead trees, and kept in order; and an attempt was made to group some of the plants grown in the outdoor nursery. Much, however, cannot be done in such a large space with the present means at command.

The Prince's Bridge lake islands were cleaned and more plants added. The Yarra bank, bordering the lake, has long been the resort of abandoned characters of both sexes, who haunt the place day and night, making their abodes in the seedling wattles and long grass. The conduct of these people is most disgraceful and dangerous; and the very limited staff available renders it impossible to keep them thoroughly in check. A few months ago one of these desperate ruffians—the common hangman—attacked a carter employed in the Gardens, and bit a piece out of his cheek. The only practical way I have found to disturb these birds of prey has been to cut away and destroy the grass and redundant vegetation in which they harbor. This has been done to a great extent, but the evil is one which requires thoroughly rooting out by the strong hand of the law.

The South Yarra Drive requires immediate channelling from end to end. The late heavy rains have caused the ground to be cut up and deep ruts have been created. Very great damage will be caused by delay, and it is highly desirable that the Public Works Department should take the matter in hands at once. I have asked in draft Estimates the sum of £800 for the purpose.

I have the honor to be, Sir,

Your obedient servant,

WILLIAM R. GUILFOYLE,

Curator of Botanic and Domain Gardens.

SUPPLEMENTARY DESCRIPTIVE LIST OF NATIVE WOODS PREPARED AND FORWARDED TO THE SYDNEY METROPOLITAN EXHIBITION 1877.

Botanical Name.	Vernacular Name, &c.
<i>Acacia homalophylla</i> (A. Cunningham)	"The fragrant Myall Wood." On the banks of the Murray river this species grows to a considerable size, the trunk sometimes attains a diameter of 18 inches, and furnishes the most beautiful wood of all the <i>Acacia</i> family. It is extensively used in the manufacture of fancy pipes, rulers, stockwhip-handles, napkin-rings, and many other articles of domestic utility or ornament. The wood is very fragrant and durable. Habitat, Victoria and New South Wales.
<i>Banksia littoralis</i> (Robt. Brown)	"The West Australian Coast Honeysuckle." A bushy tree attaining a height of 20 to 40 feet. Wood of a rich brown color beautifully grained; suitable for cabinet work. Habitat, Sea Shores of Western Australia.
<i>Cedrela Toona</i> (Roxburgh), Syn. <i>C. Australis</i> (A. Cunningham)	"The Sydney Red Cedar." In the brush lands of Northern New South Wales this magnificent timber tree attains a height of 150 feet, with a stem circumference of over 30 feet, often furnishing logs 10 feet in diameter of solid wood. In India it attains to a great size; the timber is known commercially as "Chittagong wood." The bark is astringent and febrifugal and has proved a valuable agent in fever and dysentery. The flowers afford a red dye. Habitat, New South Wales, Queensland and India.
<i>Eucalyptus corynoealyx</i> (F. Mueller)	A tall shrub or small bushy tree; wood hard and durable, used as fuel. Habitat, South Australia.
<i>Eucalyptus globulus</i> (Labillardière)	"The Blue Gum," known on the Continent of Europe as the "Fever Tree." A magnificent tree of amazing rapidity of growth. On the Bass Ranges Victoria and in Tasmania it attains to an enormous size. The timber is excellent and is much used for piles, railway-sleepers, spokes, and shafts, naval architecture and for house carpentry. The tree is now extensively planted in Italy, Algeria, Egypt, California, and many other countries not only for the value of the wood but as a preventive of fever. The deserted and fever stricken Roman Campagna has become habitable since the introduction of the "Blue Gum." Habitat, Victoria and Tasmania.
<i>Eucalyptus sideroxylon</i> (A. Cunningham)	The Victorian "Iron Bark"—"Black Mountain Ash" of New South Wales. A graceful tree attaining a height of 100 feet. The timber is excellent for wheelwrights' work timbering for mining shafts &c. Habitat, Victoria, New South Wales and South Australia.

SUPPLEMENTARY DESCRIPTIVE LIST OF NATIVE WOODS—

continued.

Botanical Name.	Vernacular Name, &c.
<i>Eucalyptus fissilis</i> (F. Mueller)...	"The Messmate." A tree of gigantic size, allied to <i>E. obliqua</i> , the "Stringy Bark;" it is of rapid growth, and furnishes a useful though not very durable wood which is in great request for shingles, palings, quartering, battens, fence-rails and fuel. Habitat, Victoria, New South Wales and Tasmania.
<i>Eucalyptus melliodora</i> (A. Cunningham)	"The Yellow Box." A medium sized tree, wood of a bright yellow-color, excessively hard and tough; used for fuel. Habitat, Victoria and New South Wales.
<i>Eucalyptus amygdalina</i> (Labillardière), variety <i>regnans</i> (F. Mueller)	The "Giant Gum"—"Stringy Gum" of the Mountains. One of the largest (if not the very largest) trees in the universe. In Gippsland trees measuring 400 feet in height are frequently met with; exceptional specimens running up to 450 feet and having a diameter of trunk of 25 feet at the base have been found. The tree affords immense quantities of good timber; its leaves furnish the best <i>Eucalyptus</i> oil. Habitat, Victoria.
<i>Eucalyptus dealbata</i> (A. Cunningham)	The Victorian "Grey Box"—"River Gum" of New South Wales. A medium sized tree of graceful habit chiefly met with adjacent to water; wood hard and durable, used for fuel. Habitat, Victoria and New South Wales.
<i>Eucalyptus polyanthemos</i> (Schauer)	"The Bastard Box." A straggling tree of medium size, wood used for fuel. Its presence usually indicates a poor soil. Habitat, Victoria, New South Wales, Queensland and North Australia.
<i>Eucalyptus Stuartiana</i> (F. Mueller)	"The Victorian Apple Tree"—"Turpentine Gum" of Queensland. A graceful dense foliated tree, height 60 to 100 feet. Wood sound tough and durable; used for building, fence-posts, rails, fuel, &c. Habitat, Victoria, New South Wales, Queensland and Tasmania.
<i>Eucalyptus goniocalyx</i> (F. Mueller)	The Victorian "Spotted Gum"—"White Gum" of Gippsland. A fine timber tree, found extensively on the coast, as well as inland. Wood used for building purposes, posts, rails, fuel &c. Habitat, Victoria and New South Wales.
<i>Eucalyptus lougifolia</i> (Link) ...	The "Woolly-Butt" or "Brown Gum" of Dandenong. A handsome medium sized tree; wood hard, sound tough and durable; used for fencing &c. Habitat, Victoria.
<i>Eucalyptus obliqua</i> (L'Heritier) (variety)	The "Red Stringy Bark" of Dandenong. A fine timber tree attaining to a great height in some districts; wood used for shingles, palings, fence-rails, building &c. Habitat, Victoria.

SUPPLEMENTARY DESCRIPTIVE LIST OF NATIVE WOODS—

continued.

Botanical Name.	Vernacular Name, &c.
<i>Eucalyptus obliqua</i> (L'Heritier) Syn. <i>E. nervosa</i> (F. Mueller)	The common "Stringy Bark." A gigantic tree often attaining a height of 300 feet, diameter of stem from 5 to 12 feet. This is one of the most useful and quick growing indigenous timber trees, its wood is very fissile and is much used for shingles, palings, fence-rails, framework of buildings and many other purposes; it is not very durable. The bark forms an excellent roofing material and is in much request amongst the settlers for this and a variety of other purposes. Habitat, Victoria South Australia and Tasmania.
<i>Eucalyptus leucoxylon</i> (F. Mueller)	The "Milk-White Gum" of Dandenong known also as "Spurious Iron Bark." A beautiful tree with smooth white bark; wood hard and durable, fit for railway sleepers, fence-posts, and spokes of wheels, used also as fuel. Habitat, Victoria, New South Wales and South Australia.
<i>Eucalyptus amygdalina</i> (Labillardiere)	"The Narrow-leaved Peppermint." A tree varying much according to soil and situation, in mountainous districts it attains a great size, several forms or varieties occur one of which (<i>E. regnans</i>) has been already described. Its principal economic value is the quantity and quality of the oil afforded by the leaves. The wood is chiefly used for fuel. Habitat, Victoria, &c.
<i>Hakea Baxterii</i> (Robt. Brown) ...	"The Fan-leaved Hakea." A pretty shrub, somewhat resembling <i>H. cucullata</i> in habit; wood beautifully grained, hard, tough and sound. Habitat, Western Australia.
<i>Harpullia pendula</i> (Planchon) ...	"The Moreton Bay Tulip Wood." A fine ever-green tree; wood beautifully marked, light, sound tough, and easily worked; extensively used in cabinet making. Habitat, Queensland.

LIST OF GRASSES AVAILABLE FOR DISTRIBUTION, MELBOURNE
BOTANIC GARDENS, JUNE 1877.

Botanical Name.	Vernacular Name.
<i>Andropogon argenteum</i> ...	"The Silver Beard-grass."
<i>giganteum</i> ...	"The Giant Beard-grass."
<i>halepensis</i> ...	"The Aleppo Grass."
<i>Aira flexuosa</i> ...	"The Waved Hair-grass."
<i>Agrostis duleis</i> ...	"The Sweet Bent-grass."
<i>Alopecurus pratensis</i> ...	"The Meadow Foxtail grass."
"Alkali Grass"
<i>Bromus giganteus</i> , var. <i>longifolius</i> ? ...	"The Long-leaved Brome grass."
<i>purgans</i> ...	"The Purging Brome grass."

LIST OF GRASSES AVAILABLE FOR DISTRIBUTION—*continued.*

Botanical Name.	Vernacular Name.
<i>Bromus ciliatus</i> ...	"The Fringed Brome grass."
<i>pubescens</i> ...	"The Hairy Brome grass."
<i>unioloides</i> ...	"The Prairie grass."
<i>marginatus</i> ...	"The Margined Brome grass."
"Basuta Grass" ...	
<i>Cynodon dactylon</i> ...	"The Indian Doab or Couch grass."
<i>Carex chlorantha</i> ...	"The green-flowered Sedge-grass."
<i>inversa</i> ...	"The inversed Sedge-grass."
<i>Dactylis glomerata</i> ...	"The common Cocksfoot grass."
<i>glaucescens</i> ...	"The sea green Cocksfoot-grass."
<i>Danthonia penicillata</i> ...	"The Wallaby Grass."
<i>Dichelachne crinita</i> ...	"The hairy Dichelachne."
<i>Digraphis arundinacea</i> ...	"The Slate-grass."
<i>Elymus Virginicus</i> ...	"The Virginian Lyme Grass."
<i>condensatus</i> ...	"The bunch Lyme grass."
<i>Festuca elatior</i> ...	"The tall Fescue grass."
<i>rubra</i> ...	"The red creeping Fescue grass."
<i>pratensis</i> ...	"The meadow Fescue grass."
<i>gigantea</i> ...	"The Giant Fescue grass."
<i>Schenezerii</i> ...	"Schenezer's Fescue grass."
<i>dimorpha</i> ...	"The Jewell grass."
<i>drimeja</i> ...	"The Morning grass."
<i>distichophylla</i> ...	"The native Couch grass."
<i>durinseula</i> ...	"The rigid Fescue-grass."
<i>Glyceria fluitans</i> ...	"The Manna or Floating grass."
<i>Hordeum bulbosum</i> ...	"The bulbous-rooted Barley-grass."
<i>Hemarthria compressa</i> ...	"The compressed Hemarthria."
<i>uncinata</i> ...	"The hooked Hemarthria."
<i>Holcus lanatus</i> ...	"The Soft or Sugar grass,"
"Kentucky Blue grass" ...	
<i>Lygicum spartum</i> ...	"The Broom grass."
<i>Microlæna stipoides</i> ...	"The Stipa-like Microlæna."
<i>Milium multiflorum</i> ...	"The many flowered Millet grass."
<i>Poa ægyptica</i> ...	"The Egyptian Meadow grass."
<i>australis</i> ...	"The native Wiry grass."
(variety "tenax") ...	"The tough Wiry grass."
<i>sudetica</i> ...	"The Sweedish Meadow grass."
<i>pratensis</i> ...	"The common Meadow grass."
<i>Virginica</i> ...	"The Virginian grass."
<i>Brownii</i> ...	"Brown's Meadow grass."
<i>alpina</i> ...	"The Scotch Meadow grass."
<i>Panicum plicatum</i> ...	"The plaited Panic-grass."
<i>altissimum</i> ...	"The tallest Panic grass."
<i>decompositum</i> ...	"The withered Cockspur grass."
<i>trigonum</i> ...	"The three-angled Panic grass."
<i>spectabile</i> ...	"Philips-grass," the "Caapim" of Angola.
<i>Pennisetum longistylum</i> ...	"The long-styled Pennisetum."
<i>Paspalum dilatatum</i> ...	"The spreading Paspalum."
<i>distichum</i> ...	"The Swamp Couch grass."
<i>Piptatherum Thomasii</i> ...	"Thomas' falling Awn grass."
<i>Phleum pratense</i> ...	"The Catstail or Timothy-grass."
<i>Stenotaphrum glabrum</i> ...	"The Buffalo-grass."
<i>Stipa pennata</i> ...	"The common Feather grass."
<i>flavescens</i> ...	"The yellowish Feather grass."
<i>mollis</i> ...	"The soft Feather grass."
<i>Sporobolus elongatus</i> ...	"The elongated Sporobolus."
<i>Vilfa tenacissima</i> ...	"The tough Vilfa."

APPENDIX A.

The following *Natural Orders* of Plants are now completed as far as our present means will permit :—

ORDERS ARRANGED NEAR RESERVOIR.

MYOPORINEÆ, represented by the following genera and species—

Myoporum Cunninghamii
 deserti
 humile
 lætum
 insulare
 viscosum
 two species not described
 platycarpum
 Eremophila bignoniæflora
 longifolia
 Freelingii
 maculata
 oppositifolia
 Pholidia divaricata

ACANTHACEÆ, represented by the following genera and species—

Acanthus montanus
 longifolius
 spinosus
 latifolius
 Asystasia (Ruellia) chelonoides
 Barleria cristata
 Beloperone oblongata
 Cyrtanthera magnifica
 Goldfussia anisophylla
 glomerata
 Justicia Adhatoda
 splendens
 Libonia floribunda
 Peurhosiensis
 Meyena erecta
 Peristrophe lanceolata
 Ruellia Herbstii
 longifolia
 Thunbergia laurifolia
 natalensis
 Thysacanthus rutilans

VERBENACEÆ, represented by the following genera and species—

Cytharexylon quadrangulare
 subserratum

Duranta elliptica
 brachypoda
 inermis
 Plumieri
 Mexicana
 Fischeri
 stenostachya
 Lantana coccinea
 urticæfolia
 crocea
 purpurea
 mixta
 Sellowiana
 grandiflora
 and a large number of garden varieties
 Lippia citriodora
 sp. Bergamot scented
 Spartothamnus junceus
 Verbena bonariense
 prostrata
 venosa
 Vitex Angus-castus
 arborea
 littoralis
 Lourei
 Callicarpa maerophylla
 cana
 Americana
 Clerodendron nutans
 tomentosum
 SCROPHULARINEÆ, represented by the following—
 Antirrhinum majus
 rupestre
 assurgens
 Alonsoa incisifolia
 Warszewiczii
 Browallia Jamesonii
 Franciscea (Brunfelsia) Americana
 Hopeana
 Buddlea dysophyllus
 arctica
 Madagascariensis
 var. canescens
 sp. not described

Buddlea globosa
 Lindleyana
 saligna
 salvifolia
 Chelone barbata
 Digitalis purpurea
 canariensis
 fulva
 Diplacus glutinosus
 superbus
 Duboisia myoporoides
 Halleria lucida
 Linaria vulgaris
 Maurandya Barclayana
 Mimulus cardinalis
 Paulownia imperialis
 Penstemon Adamsonii
 campanulatum
 cordifolium
 Lobbianum
 Hartwegii
 pulehellum
 alba
 Torreyi
 eobæa
 Colvillei
 hybrida
 spectabilis
 Seouleri
 latifolius
 a great many garden hybrid varieties
 Phygelius capensis
 Russelia juncea
 Serophsularia alpina
 frutescens
 Smithii
 Verbascum Blattaria
 Thapsus
 Veronica Andersonii
 Lavaudiana
 arguta
 buxifolia
 elliptica
 diosmæfolia
 formosa
 Hulkeana
 longifolia
 var. pubescens
 Derwentia
 neglecta
 versicolor
 perfoliata
 parviflora
 speciosa
 salicifolia
 spicata
 sibirica
 sarmentosa
 Hectori

Veronica cupressoides
 Schmidtii
 Auarrhinum bellidifolium
 Anthoecereis viscosum

BIGNONIACEÆ, represented by the following—

Adenocalymna nitida
 Bignonia Lindleyana
 Chirire
 Tweediana
 velutina
 Bungeana
 carnea
 venusta
 fulva
 Catalpa bignonioides
 Gelsemium sempervireus
 Jacaranda mimosæfolia
 Mansoa lanceolata
 Oxera pulehella
 Tecoma australis
 var. La Trobei
 hybrida
 grandiflora
 Mughus
 jasminoides
 var. alba
 radicans
 sorbifolia
 Stans
 cerameusis
 capensis

JASMINEÆ (including Oleineæ) represented by the following—

Jasmineæ, proper.

Jasminum didymum
 fruticans
 grandiflorum
 pubigerum
 racemosum
 revolutum
 simplicifolium
 officinale
 nudiflorum
 Reevesianum
 suavissimum
 sp. undescribed

Sub-order—*Oleineæ.*

Olea capensis
 europæa
 ferruginea
 fragrans
 ilicifolia
 paniculata

<i>Olea verrucosa</i>	<i>Ligustrum japonicum</i>
<i>Wrightii</i>	<i>glabrum</i>
sp. undescribed	<i>ovalifolium</i>
<i>Chionanthus ramiflorus</i>	<i>nepalense</i>
<i>virginica</i>	<i>undulatum</i>
<i>Fontanesia phylliræoides</i>	<i>syringæfolium</i>
<i>Forsythia suspensa</i>	<i>vulgare</i>
<i>viridissima</i>	<i>leucocarpum</i>
<i>Fraxinus americana</i>	sp.
<i>excelsa</i>	<i>Notelæa lignistrina</i>
<i>lutea</i>	<i>longifolia</i>
<i>pendula</i>	<i>ovata</i>
<i>aurca</i>	<i>Phillyrea angustifolia</i>
<i>floribunda</i>	<i>latifolia</i>
<i>monophylla</i>	<i>media</i>
<i>Ornus</i>	<i>oleæfolia</i>
<i>pubescens</i>	<i>Syringa persica</i>
sp. <i>Canada</i>	<i>alba</i>
<i>quadrangulata</i>	<i>vulgaris</i>
sp. (Wax Ash)	sp.

NATURAL ORDER, GROUPED IN THE VICINITY OF FERN GULLY.

PALMÆ, represented by the following genera and species—

Seaforthia (*Ptychosperma*) *elegans*
 robusta

Licuala sp.

Rhapis flabelliformis

Calamus australis

Caryota urens

Ptychosperma Alexandræ

Caliptrocalyx spicatus

Latania borbonica

Jubæa spectabilis

Chamærops Fortunei

elegans

macrocarpa

excelsa

humilis

Phoenix pumilio

reclinata

sylvestris

dactylifera

spinosa

acaulis

leonensis

Kentia (*Areca*) *monostachya*

Belmoriana

sapida

Cocos plumosa

Areca sp. *South America*

concinna

Pritchardia Martii

Kentia macrocarpa

olivæformis

Sabal Adansonii

mauritiiformis

Sabal unbraculifera

Arenga obtusifolia

Livistonia olivæformis

 sp. from *Malacca*

rotundifolia

altissima

maritima

 (*Corypha*) *australis*

Harina caryotoides

CYCADEÆ, represented by the following—

Macrozamia Miqueli

spiralis

Mackeni

Perowskiana

cylindrica

 sp. from *Society Islands*

Fraserii

Paulo-Guilielmi

tenuifolia

Encephalartos lanuginosus

Lehmannii

Altensteinii

cycadifolia

Stangeria paradoxa

Cycas media

Normanbyana

 sp. *New Guinea*

circinalis

Rhumphii

The Orders PALMÆ and CYCADEÆ, are intermixed.

ORDERS GROUPED ON NEW LAWN.

LAURINEÆ, represented by the following—

Cinnamomum zeylanicum
 Camphora
 Laurus indica
 Tamala
 nobilis
 borbonia
 Cinnamomum
 Litsæa dealbata
 glauca
 Nesodaphne Tawa
 Oreodaphne californica
 Cryptoearya glaucescens
 obovata
 australis
 sp. undescribed
 Tetranthera ferruginea

PITTOSPOREÆ, represented by the following—

Billardiera cymosa
 Bursaria spinosa
 Citriobatus multiflorus
 Pittosporum cornifolium
 crassifolium
 Colensoi
 eugenoides
 revolutum
 rhombifolium
 rigidum
 pbillyræoides
 tenuifolium
 Tobira
 undulatum
 Hymenosporum flavum

SAXIFRAGEÆ, represented by the following—

Eseallonia maerantha
 montevidensis
 organensis
 rubra
 Baueria sessiliflora
 rubæoides
 Itea virginica
 Deutzia eorymbosa
 erenata
 flore pleno
 Saxifraga cæspitosa
 palmata
 Sternbergii
 hypnoides
 intacta

Deutzia gracilis
 seabra
 Ceratopetalum apetalum
 gummiferum
 laurifolium
 Aphanopetalum resinosum
 Callicoma serratifolia
 Philadelphus coronarius
 speciosus
 grandiflorus
 Saxifraga rotundifolia
 sarmentosa
 Tellima grandiflora
 Weinmannia paniculosa

ROSACEÆ, represented by the following—

Tribe 2.—*Drupaceæ*.

Prunus ehieasa
 Cerasus
 Lauro-cerasus
 lusitanica
 Mahaleb
 Myrobalana
 serotina
 sinensis
 spinosa
 Virginiana
 americana
 sp. undescribed
 Cerasus ilicifolius
 Amygdalus communis
 Persica

Tribe 3.—*Spiræacæ*.

Spiræa bella
 callosa
 confusa
 carpinifolia
 salicifolia
 var. rosca
 filipendula
 hypericifolia
 opulifolia
 Reevesiana
 var. fl. pl.
 Ulmaria
 undulata
 Lindleyana
 Fortunei
 nutans var. argentea
 var. rhamnifolia
 seven species undescribed
 Kerria japonica
 var. fl. pl.

Tribe 4.—*Fragariaceæ*.

Fragaria vesca
Potentilla pennsylvanica
 recta
 geoides
 rupestris
 Schicaticana
 affine
 hamatochrus
 argentea
 chrysantha
 collina
 glandulosa
Geum
 coccineum
 urbanum
 Wiccei
 Rafinesqueanum
Agrimonia odorata
 leucantha
 repens
 pilosa
 Eupatoria
Rubus
 biflorus
 Borreri
 Balforianus
 cordifolius
 corylifolius
 dumetorum
 diversifolius
 Idæus
 laciniatus
 Lindleyanus
 macropodus
 paludosus
 roseifolius
 echinatus
 rhamniifolius
 suberectus
 thyrsoides
 rugosus
 australis
 canadensis
 sp. undescribed

Tribe 5.—*Sanguisorbeæ*.

Poterium sanguisorba
 var. minor
Acæna sanguisorbæ
Sanguisorba tenuifolia

Tribe 6.—*Rosææ*

Rosa *Banksiæ*
 canina
 caroliniana
 damascena
 lævigata
 nana
 rubiginosa

Rosa blanda
 spinosissima
 setigera
 cinnamomea
 var. glandulifera
 3 *sp. undescribed*

Tribe 7.—*Pomacææ*.

Pyrus *Malus*
 arbutifolia
 aucuparia
 var. quercifolia
Aria
 baccata
 var. aurantiaca
 var. microcarpa
 cerasifera
 coronaria
 latifolia
 pinnatifida
 prunifolia
 var. conocarpa
 var. longicarpa
 salicifolia
 spectabilis
 5 *sp. undescribed*
Cydonia vulgaris
 japonica
Eriobotrya japonica
Mespilus germanica
Quillaja saponaria
Raphiolepis indica
 variety
 ovata
Photinia serrulata
Cotoneaster rotundifolia
 Roylei
 Simmondsii
 tomentosa
 vacciniifolia
 buxifolia
 vulgaris
 affinis
 baccillaris
 microphylla
 obtusata
 nepalense
 2 *sp. undescribed*
Cratægus coccinea
 pyracantha
 oxyacantha
 var. laciniata
 flore rosea
 var. criocarpa
 var. stricta
 var. obtusa
Azarolus
 sanguinea
 punctata

Cratægus crus-galli
 var. *ovalifolia*
 var. *prunifolia*
pyrifolia
 var. *spinosa*
tanacetifolia variety
Celsiana
 var. *odoratissima*
virginica
 several undescribed species

URTICEÆ (including *Moracæ*, *Ulmacæ*, *Cannabinacæ*, and *Platanacæ*), represented by the following—

Sub-order—*Moracæ*.

Broussonetia papyrifera
Ficus aspera
rubiginosa
Carica
elastica
lucida
macrophylla
macrocarpa
nitida
religiosa
stipulata
vesca
Sycomorus
syringæfolia
Hardlandii
nesophila
lurida
latifolia
Maclura aurantiaca
Morus alba
 var. *Morettiana*
 var. *multicaulis*
 Cape Good Hope
nigra
rubra
mauritiana

Sub-order—*Ulmacæ*.

Planera japonica
Celtis occidentalis
 var. *cordata*
australis
 sp. Cape Good Hope
rhamnifolia
Trema orientalis
Ulmus campestris
 var. *viminalis*
 var. *variegata*
 var. *pendula*
 var. *purpurea*

Ulmus montana
 var. *fastigiata*
suberosa
chinensis
americana
 var. *pendula*

Sub-order—*Cannabinacæ*.

Cannabis sativa
 var. *gigantica*
Humulus lupulus

Sub-order—*Platanacæ*.

Platanus occidentalis
orientalis

Urticæ proper.

Urtica ferox
Bœhmieria argentea
macrophylla
 sp. *Java*
nivea
Pipturus propinquus
Laportea gigas
photiniphylla
Parietaria officinalis

SOLANEÆ, represented by the following—

Atropa Belladonna
Brugmansia suaveolens
 var. *lutea*
Knightii
Cestrum anrantiaecum
odoratissimum
diurnum
nocturnum
foetidissimum
Chænesthes lanceolata
Datura sanguinea
meteloides
Fabiana imbricata
Habrothamnus Ronyalli
elegans
scaber
fasciculatus
 sp. *undescribed*
Hyoscyamus niger
Jochroma tubulosa
Withania somnifera
Lycium australe
rigidum
barbarum
 sp. *Caffir Thorn*
Nicotiana Tabacum
glauca
rustica

Neirembergia frutescens
Petunia variabilis
Physalis peruviana
Solandra lævis
Solanum auriculatum
 atropurpureum
 repandum
 cafferum
 coriaceum
 Dulcamara
 glaucophyllum
 hystrix
 hæmatocarpum
 jasminoides
 simile
 laeniatum
 marginatum
 nigrum
 pseudo-capsicum
 ciliatum
 pyracanthum
 sodomæum
 robustum
 four undescribed species

PROTEACEÆ, represented by the following—

Banksia marginata
 Cunninghamii
 integrifolia
 ericifolia
 Hookerii
 littoralis
 Baxteri
 serrata
 Brownii
 three sp. undescribed
Grevillea alpina
 var. *Dallachiana*
 aquifolium
 Banksii
 confertifolia
 liucaris
 oleoides, var. *dimorpha*
 ericifolia
 ilicifolia, var. *lobata*
 longifolia
 macrostylis
 obtusifolia
 parviflora
 riparia
 robusta
 Hilliana
Hakea *acicularis*
 Baxterii
 ulicina
 corymbosa
 crassifolia
 cucullata

Hakea cycloptera
 elliptica
 eriantha
 laurina
 flexilis
 gibbosa
 leucoptera
 microcarpa
 nitida
 nodosa
 oleæfolia
 propinqua
 purpurea
 pugioniformis
 rostrata
 saligna
 suaveolens
 undulata
 verrucosa
 trincura
 orthorrhyncha
 five sp. undescribed

Macadamia ternifolia

Knightia excelsa

Leucadendron argenteum

glabrum

uliginosum

 sp. undescribed

Lomatia silaifolia

longifolia

Telopia speciosissima

Stenocarpus salignus

 variety

sinuatus

Protea mellifera

cynaroides

aurea

 sp. undescribed

Dryandra plumosa

floribunda

 sp. undescribed

THYMELEÆ, represented by the following—

Daphne Houtteana

laureola

Mezereum

hybrida

indica

alba

rubra

Dais cotinifolia

Pimelea curviflora

drupacea

linifolia

clavata

octophylla

humilis

decussata

CUPULIFERÆ, represented by the following—

- Quercus* *robur*
 var. *fastigiata*
 lancifolia
 reticulata
 lusitanica
 var. *Mirbeckii*
 suber
 spicata
 rubra
 lanata
 Hodgkinsonii
 cerris
 varieties of
 castanea
 sinuata
 Ilex
 varieties of
 coccifera
 alba
 macrocarpa
 bicolor
 Ægilops
 glauca
 varieties
 lobata
 agrifolia
 serrata
 glabra
 Tauzin
 mexicana
 paniculata
 virens
 coccinea
 cinerea
 polymorpha
 carnea
 sonomensis
 tinctoria
 cuneata
 Gerhardiana
 Dalechampeii
 alnoides
Corylus *Avellana*
Myrica *cerifera*

BERBERIDACEÆ, represented by the following—

- Berberis* *aristata*
 asiatica
 buxifolia
 aquifolia
 canadensis
 stenophylla
 crassifolia
 cratægina
 Darwinii
 diversifolia

Berberis *Fortunei*

- fuchsoides*
Hookeri
orientalis
hypoleuca
iberica
Jamiesonii
japonica
laxiflora
Leschenaulti
macrophylla
mexicana
Newberti
sp. undescribed
pinnata
pallida
provincialis
sinensis
sanguinolenta
tenuifolia
trifoliata
vulgaris
 var. *lutea*
 var. *purpurea*
Nandina domestica

POLYGALEÆ, represented by the following—

- Polygala* *speciosa*
 myrtifolia
 Dalmasiana
 grandiflora
 oppositifolia
 grandis

Muraltia *Heisteria*

ANONACEÆ, represented by the following—

- Asimina* *triloba*
Eupomatia *laurina*

MAGNOLIACEÆ, represented by the following—

- Liriodendron* *tulipiferum*
Illicium *grandiflorum*
 floridanum
Magnolia *tomentosa*
 superba
 acuminata
 tripetala
 fuscata
 var. *anonæfolia*
 spectabilis
 grandiflora
 var. *lanceolata*
Norbertiana
 glauca
 Yulan
 obovata
 Lenne

Michelia neilgherrica

Champaca

Drimys axillaris

aromatica

TERNSTREMIACEÆ, represented
by the following—

Thea Bohea—"Black Tea"

Assamica—"Assam Tea"

Camellia Japonica (Japanese Camellia)

reticulata

sasanqua rosea

RANUNCULACEÆ, represented by
the following—

Clematis aristata

erispa

flammula

 var. *maritima*

microphylla

pubescens

patens

Thalictrum aquilegiæfolium

macrocarpum

minus, var. *clatum*

simplex

 sp. undescribed

Anemone japonica

alba

virginiana

cylindrica

Ranunculus asiatica

Breynianus

brutius

oreophilus

millefoliatus

muricatus

Stevenii

Helleborus lividus

niger

Aquilegia formosa

canadensis

Pæonia arietina

officinalis

peregrina

mollis

ERICACEÆ, represented by the fol-
lowing—

Clethra alnifolia

Cyrilla recemeflora

Erica arborea

cinerea, var. *atropurpurea*

 var. *alba*

 var. *major*

 var. *rosea*

 var. *purpurea*

andromedæflora

baccans

ealycina

ciliaris

Erica concinna

coccinea

cerinthoides

 var. *coronata*

cruenta

margaritacea

multiflora

pilosa

Giloa

Petiveri

pallida

phylicoides

tubiflora

urceolaris

verticillata

variegata

valgaris

 var. *tenuis*

 var. *foliis aureis*

Wilmorci

Bowieana

autumnalis

hiemalis

nigrita

hybrida

Cavendishii

persoluta

alba

pyramidalis, var. *gracilis*

Tetralix

alba mollis

stricta

rubens

vagans

 var. *grandiflora*

 var. *alba*

linnæoides

ventricosa var. *Brownii*

 var. *breviflora*

 var. *minor*

 var. *crecta*

 var. *grandiflora*

 var. *globosa*

 var. *Rothwelliana*

 var. *rosea*

 var. *magnifica*

 var. *superba*

 var. *impressa*

aristata major

Burnetti

colorans

alba, var. *minor*

vernix coccinea

mammosa

rigida, var. *alba*

Hammondii

pygmæa

Mackeyana

Allportei

 sp. (2)

Kalmia latifolia
 Menziesia polifolia
 var. alba
 Rhododendron arboreum
 ponticum
 neilgaricum
 fragrantissimum
 aucubæfolium
 Arctostaphylos tomentosa
 arbutoides
 Arbutus Unedo
 Menziesii
 procera
 sp. (2) undescribed
 Andromeda Catesbæi
 formosa
 phillyræfolia

Azalea indica
 phœnicea
 obtusa
 microphylla

EPACRIDEÆ, represented by the following—

Sprengelia cœrulea
 Epacris exserta
 longiflora
 impresa
 var. carminea
 var. paludosa
 var. acuminata

Acrotriche serrulata
 Leucopogon Richii
 Astroloma humifusa

LIST OF PLANTS INTRODUCED INTO GARDENS SINCE JULY 1876,
 EITHER QUITE NEW TO THE ESTABLISHMENT OR TO RE-
 PLACE THOSE WHICH HAD BEEN LOST IN FORMER YEARS.

Those marked with an asterisk are re-introductions.

Agave Shawi
 cœrulescens
 Ailanthus excelsa
 Asperula azurea
 Auenone cylindrica
 Acer japonicum, var. rufinervum
 polymorphum dissectum, fol. roseum
 versicolor
 palmatifidum, fol. variegatum
 Asclepias incarnata
 Abutilon Darwini, var. tessellatum
 Van Houttei, var. aurea
 vexillarium (megapotamicum), var.
 variegatum
 Auguste Paswald
 Azalea La Victorie
 Chas. Encke
 Charmer
 Sigismund Rucker
 Todmanni
 Mdme. Paul Desanger
 Marquis of Lorne
 Maximilian I.
 occidentalis
 Ampelopsis Veitchii
 Azara microphylla
 Arctostaphylos tomentosa
 Abelia triflora
 arbutioides
 Alstrœmeria Olympica

Aristolochia ornithocephala
 labiosa
 ciliata
 sempervireus
 Adhatoda ventricosa
 Aphelexis macrantha purpurea
 Alternanthera Verschaeltii
 Artocarpus odoratissimus
 Lakoocha?
 Amoora Roxburghii
 Alangium decapetalum
 Barringtonia acutangula
 Bambusa auriculata
 Tulda?
 Balcoopa?
 Bergera Kœnigii
 Begonia Mrs. Joske
 caffra
 Bigunia alba-lutea
 ornata
 capreolata
 Boltonia glastifolia
 Bouvardia elegans
 Maidens'-blush
 Bridal-wreath
 Oriflamme
 umbellata carnea
 Banksia Fortunei
 Hookeri
 paludosa

LIST OF PLANTS INTRODUCED INTO GARDENS SINCE JULY 1876,
ETC.—continued.*Those marked with an asterisk are re-introductions.*

- Berberis stenophylla
 Colubrina Nepalesensis
 Coffea bengalensis
 Carissa Carandas
 *Citrus Bergamia
 Coleus Mrs. Sangster
 Canna Richorelli
 *Candollea cuneiformis
 *Cytisus Laburnum, var. purpurascens
 Caragana microphylla
 Calamagrostis longifolia
 Codium (Croton) grande
 picturata
 Weismanni
 spirale
 Haukeri?
 undulatum
 Goodenovii
 Disraeli
 Lord Cairns
 Lord Derby
 Corynocarpus lævigatus, fol. aureus variegatus
 *Calostemma purpurea
 Crotalaria laburnifolia
 Cynoglossum australe
 Cornus alba, var. sibirica
 Cotoneaster acuminata
 Cyrilla racemiflora
 Chrysanthemum grandiflorum, var. intermedium
 Clerodendron fragrans, var. flore-pleno
 Cytisus proliferus, var. albus
 Cupressus Lawsoniana, var. erecta viridis torulosa, var. variegata
 Cercocarpus sp.
 Catalpa Kämpferii
 Ceanothus Veitchii
 papillosus
 Caladium Alphaud
 Auguste Riviere
 Barillet
 Beethoven
 Chantinii fulgeus
 Donizetti
 Jules Putzeys
 Leplay
 M^{me}. Andrieux
 Maxime Duval
 Triomphe de l'Exposition
 Madame Alfred Maue
 Felicien David
 Darwinia macrostegia
 Dracena fragrans
 Dipladenia amana
 Brearleyana
 Dipladenia Boliviensis
 Daphne elegantissima
 *Duranta Plumieri, var. alba
 Dillenia scabrella
 speciosa
 *Dalbergia Sissoo
 Elaeocarpus longifolius
 Eugenia caryophyllata
 Eriodendron orientalis
 *Eupatorium ageratoides
 *Erodium cicutarium
 Eupatorium Fraserii
 Erythrina insignis
 Erica cerinthoides, var. coronata
 aristata, var. major
 Burnetti
 vernex, var. coccinea
 ventricosa, var. erecta
 var. globosa
 Eurya latifolia, var. variegata
 Eulalia japonica
 Escallonia sanguinea
 Echeveria abyssinica
 Franciscea Lindleyana
 Fremontia californica
 Ficus macrocarpa
 infectoria
 oppositifolia
 Flacourtia cataphracta
 Geum macrophyllum
 Gloxinia A. Neate
 Jenny French
 Eustace Jarret
 Mrs. Bladeu Neill
 Lady Duffy
 Genetyllis fuchsoides
 Gunnera scabra
 Garrya MacLadeana
 Gladiolus—20 new varieties
 Hakea longifolia
 Hibiscus Lambertii
 *Helianthus mollis
 Hæmanthus coccineus
 *Helleborus niger
 Hedera algeriensis, var. variegata
 latifolia, var. variegata
 var. marmorata elegans
 var. marginata argentea
 Rhombica argentea
 Heritiera macrophylla
 Iberis gibraltica
 Ipomœa mexicana, var. grandiflora
 Jasminum auriculatum
 Juglans fertilis
 Jambosa sparteum
 Kydia calycina

LIST OF PLANTS INTRODUCED INTO GARDENS SINCE JULY 1876,
ETC.—*continued.**Those marked with an asterisk are re-introductions.*

Logania latifolia	Rhododendron ancubæfolium
Lespedeza capitata	fragrantissimum
Lepachys pinnata	Rhamnus papillosus
Leptosiphon androsaceus	Samalia malabarica
densiflorus	Sapindus emargiuatus
Locastylis alata	rubiginosus
Lonicera cœrulca	Sterculia urens
*Lapageria rosea	Smilax ovalifolia
Lilium Krameri	Sedum Maximowiczii
concolor	Spiræa Fortunei, var. alba
Lonicera confusa	salicifolia, var. Bethlehemensis
Lactaria callicarpa	Solanum ciliatum
Livistonia Jenkensis	Symphytum asperrimum
Monarda punctata	Sophora alopecuroides
*Melicytus lauceolatus	Salvia Grahami purpurata
Nycterinia selaginoides	Heeri
Narcissus, var. totus-albus	Verschaffelti
var. Constantinople	Saxo-Gothæa conspicua, var. variegata
Nissa fruticosa	Skimmia oblata
Nauclea Cadamba	Tropæolum peregrinum
Oxalis valdiviensis	Thermopsis fabacea
Oenothera rhombipetala	Thuopsis borealis, var. variegata
Ophiopogon luteum variegatum	Tecoma pulchra
Olea americana	Terminalia Chebula
Pimblea clavata	Tetranthera Roxburghii
Panicum virgatum	Trophis aspera
Phaseolus diversifolius	Ulmus campestris, var. variegata
Pinus Loudoniana	purpurea
Pluchea camphorata	viminalis
Polygonum filiforme, var. variegata	Verbena angustifolia
Pelargonium—13 varieties (named)	prostrata
Poinsettia pulcherrima, var. plenissima	Viola (Lee's) "Victoria Regiæ"
Punica nana	Viburnum Standishii
*Pavonia coccinea	macrocephalum
Passiflora	Vitex nitens
Canideni	Vaccinium Arctostaphylos
limbata	Wrightia mollissima
Protea aurea	Yucca Whippleyi
Phormium Colensoi, var. variegata	crenulata
Psidium aromaticum	angustifolia
Pterocarpus marsupium	Zichya mollis
*Ribes alpinum	

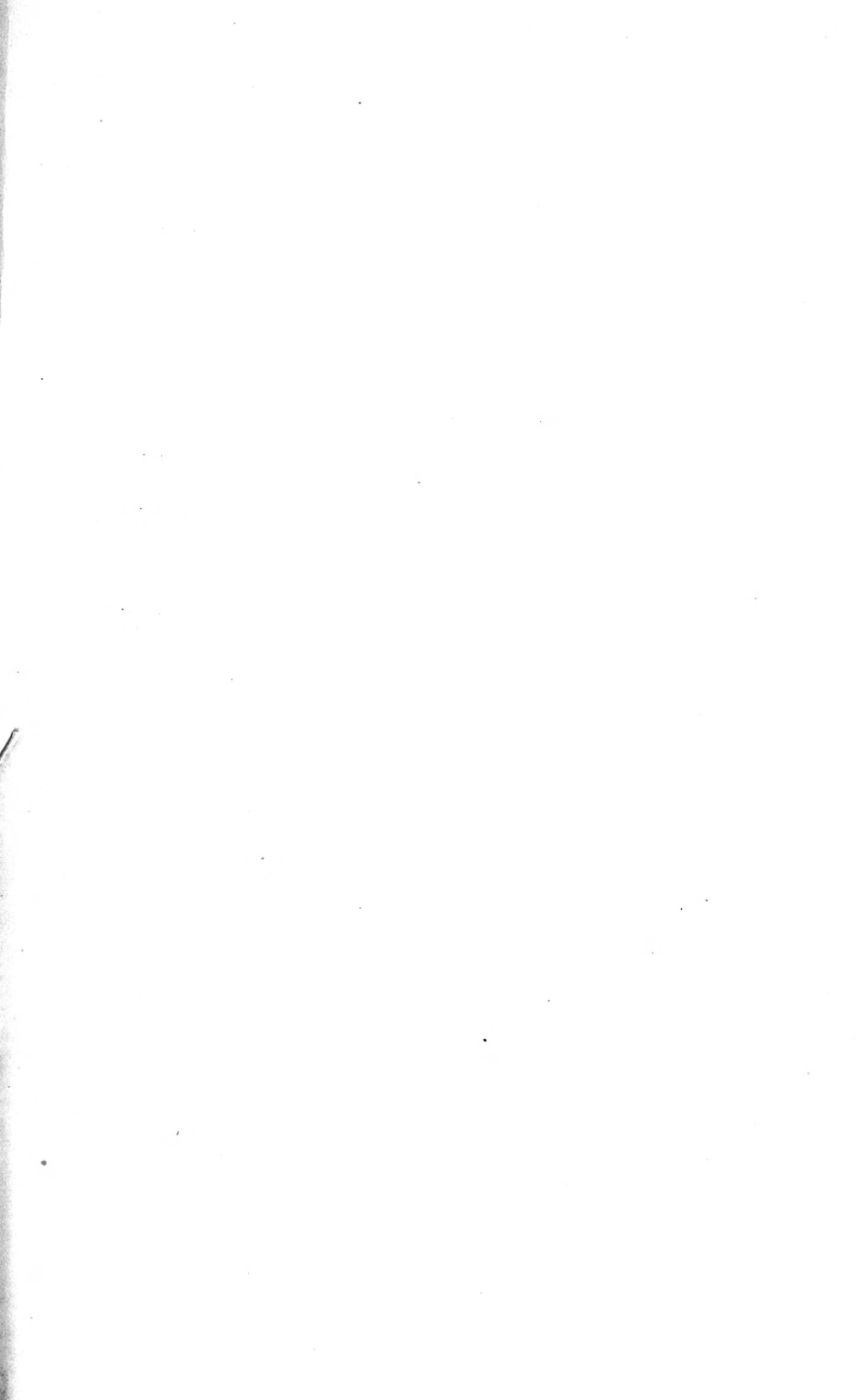
LIST OF DONORS.

- Adet, Mons. (Curcier and Adet), Melbourne. Valuable seeds and plants.
 Anderson, Mrs. Acland, South Yarra. Bordeaux Seps. (Edible Fungus.)
 Anderson, Colonel, South Yarra. Large Palms.
 Archer, W. H., Hawthorn. Seeds and cuttings.
 Archde, W., Warrnambool. Quantity select plants.
 Barry, Sir Redmond, Philadelphia, U.S. Plants and seeds.
 Berry, G. R., South Yarra. Valuable seeds.
 Beveridge, P., French Island, Western Port. Seeds.

- Biram, J., Buln Buln, Gippsland. Native ferns.
- Braithwaite, Capt., Missionary ship *Dayspring*. Very select plants from South Sea Islands.
- Brisbane Acclimatisation Society (L. A. Bernays, Esq.). Seeds.
- Brisbane Botanic Gardens (W. Hill, Director). Ferns, palms, and other plants in quantities.
- Bruce, J. (Bell, Bruce, and Co.), Melbourne. Valuable seeds.
- Brunning, G., Nurseryman, &c., St. Kilda. Valuable plants, cuttings, &c., in quantities.
- Byerley, F. J., Brisbane. Choice seeds.
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- Cartwright, R. J., Government Printing Office, Melbourne. Seeds.
- Castieau, J. B., Governor H.M. Gaol, Melbourne. Tree guards.
- Chirnside, A., Werribee Park, Wyndham. Valuable bulbs, &c., &c.
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- Clarke, Dr. E., Emerald Hill. Valuable medicinal plants, &c.
- Clarke, Marcus, Melbourne. Choice and valuable seeds in quantities.
- Cocking, Mrs., Kew. Seeds from Japan.
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- Crawford, Archdeacon, Castlemaine. Seeds.
- Curl, S. M., M.D., Rangetiki, New Zealand. Seeds in quantities.
- Dall, J., New Zealand. Valuable ferns and other plants.
- Dall, J., South Yarra. Seeds.
- Daly, W. J., Melbourne. Valuable seeds and plants from New Caledonia.
- De Pury, G., Upper Yarra. Native seeds.
- Dyer, W. T. Thistelton, M.A., Royal Gardens, Kew, London. Valuable seeds, &c.
- Eaves, S. H., Brisbane. Queensland ferns.
- Emerald Hill Town Council. Quantity of ferns and other plants.
- Farnsworth, J., Portsea. Quantity of native tree ferns.
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- Gordon, T. D., Emerald Hill. Valuable plants.
- Gordon, G., Water Supply Department, Melbourne. Choice plants.
- Government Gardens, Palmerston, Northern Territory (E. Price, Esq., Government Resident). Valuable plants.

- Grahamstown Botanic Gardens (E. Tidmarsh, Esq., Director). Large and valuable palms.
- Guilfoyle, J., Tweed River, New South Wales. Valuable seeds and plants.
- Gull, Mrs. A. E., Guildford, Western Australia. Quantity valuable palms, seeds, &c.
- Halberstaedter, A., Queensland. Seeds.
- Hannecke, C. F., Rangitiki, New Zealand. Quantity of palm and other seeds.
- Harding, J., Mount Vernon, New Zealand. Seeds.
- Harris, J., Nurseryman, &c., South Yarra. Plants.
- Harrison, J., Williamstown. Choice plants.
- Henty, E. (per Mr. Sangwell), St. Kilda. Valuable plants, seeds, &c.
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- Hobart Town Botanic Gardens (F. Abbott, Esq., Director). Plants and seeds.
- Hong Kong Government Gardens (C. Ford, Esq., Director). Choice seeds.
- Howitt, E., St. Kilda. Valuable and select plants.
- Huber and Co., Hyeres (Var), France. Large quantities seeds, tubers, &c.
- Johnson, A. M., New Zealand. Seeds.
- Johnson, T., Hawthorn. Seeds.
- Jones, C., Richmond. Quantity plants.
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- Lewis, C., Windsor. Quantity plants.
- Lincoln, A., Melbourne. Seeds.
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- Macredie, A., Piang Hill, Lower Murray. Large wood specimens.
- Marrio, Eugene, Milau, Italy. Seeds.
- Maxwell, G., Albany, West Australia. Seeds.
- McEwin, G., Glen Ewin, South Australia. Valuable plants.
- Meehan, T. and Co., Nurserymen, &c., Philadelphia. Quantity valuable seeds.
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- Miller, G. G., Moyston. Seeds of native plants in quantities.
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- Smith, J., and Sons, Nurserymen, Riddell's Creek. Select plants.
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- Stevenson, G., Toorak. Quantity cuttings.
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- Stuart, W., Penshurst, Victoria. Seeds.
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- Sutton, J., Emerald Hill. Choice seeds.
- Sydney Botanic Gardens (C. Moore, Esq., Director). Seeds.
- Taylor and Sangster, Nurserymen, &c., Toorak. Select plants, cuttings, &c.
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